

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-162165

(43)Date of publication of application : 26.06.1989

---

(51)Int.Cl. G01R 21/06

---

(21)Application number : 62-321998 (71)Applicant : SUMITOMO ELECTRIC IND LTD

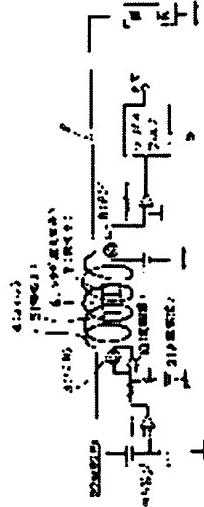
(22)Date of filing : 18.12.1987 (72)Inventor : HIROTSU KENICHI

---

## (54) POWER SENSOR

### (57)Abstract:

**PURPOSE:** To achieve a smaller size and a lighter weight of the apparatus, by a method wherein a modulation is applied to a light emitting element by a voltage at a measuring point and light thus obtained is passed through a Faraday effect element subjected to a modulation by a current at the measuring point to form a power sensor requiring no current transformer.



**CONSTITUTION:** A light emitting element LED 3 is driven with a DC power source 2. As the element is controlled with a modulator 10 with the application of a voltage of a capacitor voltage divider 1 thereto, emission of the LED 3 is turned to a light modulated by a voltage signal. The light modulated generates a Faraday effect in a coil 4 by a magnetic field with a current flowing to the coil 4 through a Faraday effect element 6 placed between a polarizer 5 and an analyzer 7 to cause a modulation of light. Light emitted from the analyzer 7 is received with a photo diode PD8 to be converted into electricity which is passed through a low pass filter 9. Thus, with the removal of an AC component, a DC component is determined to be measured with a voltmeter.

---

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application]

[converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]